

May Update to Transportation Interim Committee

Carlos Braceras, P.E., Executive Director
Utah Department of Transportation

Wrong Way Driving



Wrong Way Driving

- Average fatalities per year versus wrong way fatalities
- Average crashes per year versus average wrong way crashes

Year	Fatalities	Wrong Way Fatalities	Total Crashes	Wrong Way Crashes
2010	253	1	47,758	9
2011	243	3	46,396	20
2012	217	1	49,254	15
2013	220	0	55,463	11
2014	256	3	52,090	23
2015	278	4	57,526	19
2016	281	2	62,363	27
2017	273	0	62,855	13
2018	260	3	62,073	28
2019	248	1	62,411	22
2020	276	7	50,605	42
2021	328	5	61,457	25
Average	261.1	2.5 (1.0%)	55,854	21.2 (0.04%)
2022	99	5 (5.1%)	19,752	14 (0.07%)

Wrong Way Driving

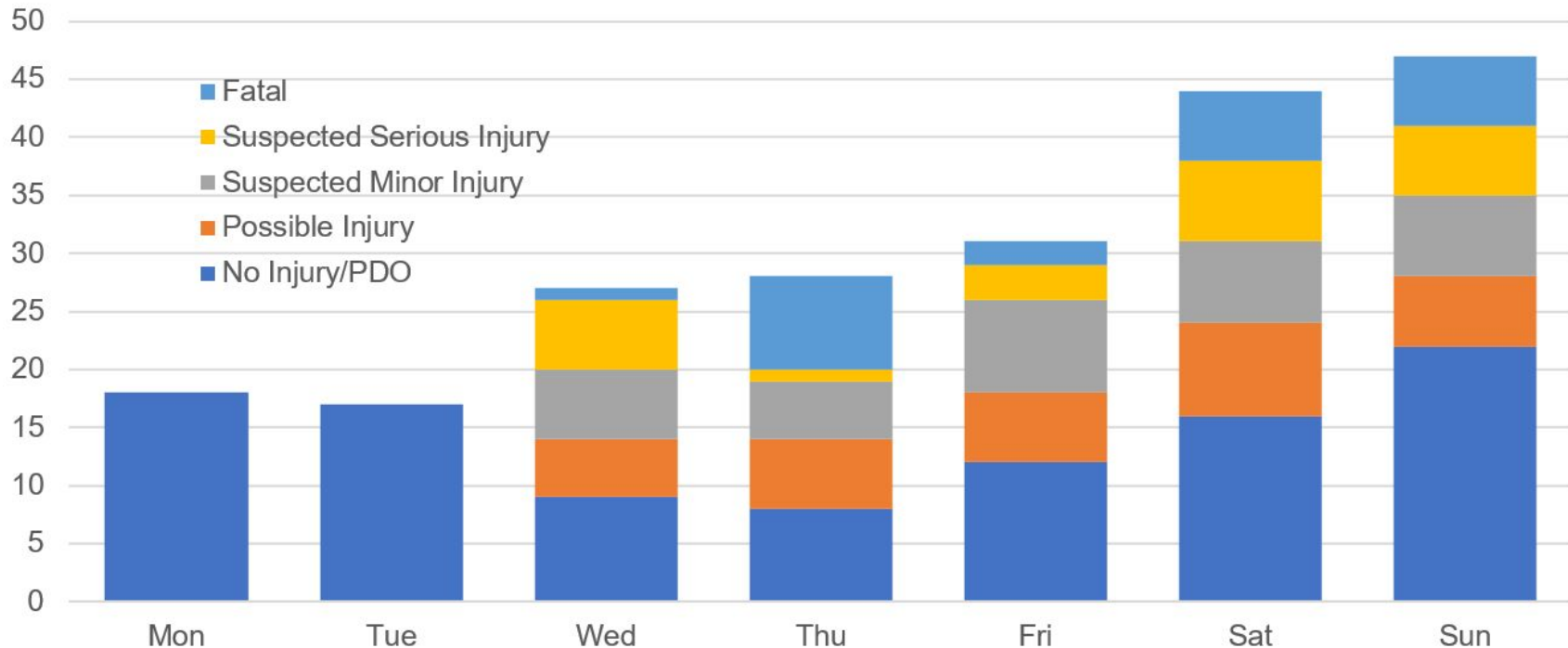
13% of Wrong
Way Crashes
are Fatal

Other fatal crash type %'s

- 0.26% of Intersection Crashes
- 0.50% of Red Light Running
- 1.05% of Roadway Departure
- 3.70% of DUI
- 4.95% of Pedestrian

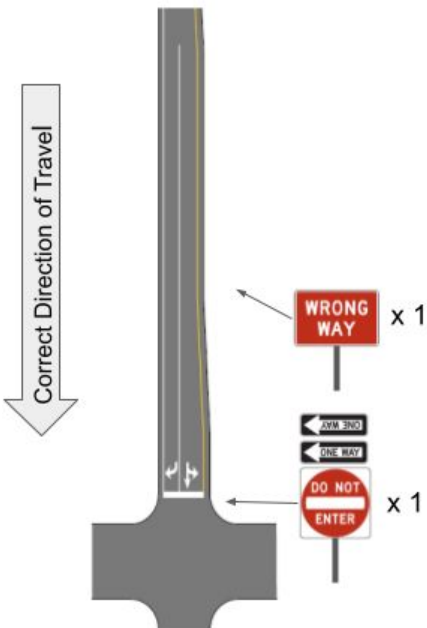
Wrong Way Driving

Total Crashes & Crash Severity by Day of Week (2010 - 2022)

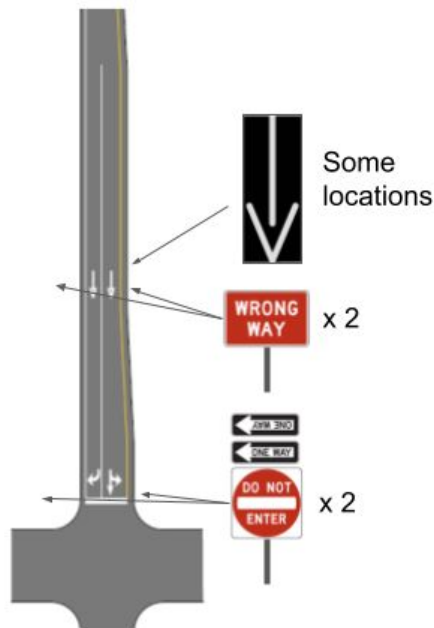


Wrong Way Driving

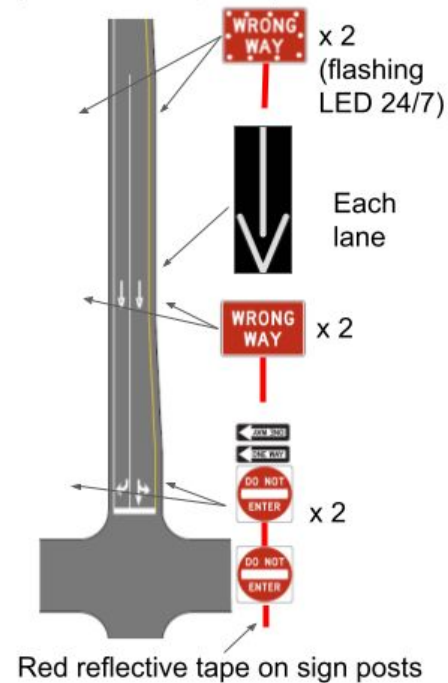
MUTCD Minimum



Current Standard



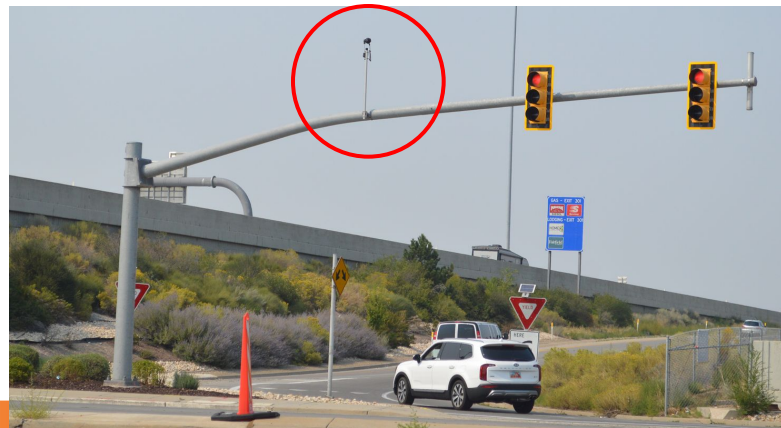
Future Standard
(Under Development)



Wrong Way Driving Sensors

FLIR Thermal Imaging Sensors

- Present on 42 off ramps throughout the state
- Uses thermal energy emitted from vehicles and bicyclists
- Utah wrong-way detection system
\$16,000 per site



Wrong Way Driving - Sensors Next Generation

Alternative Wrong-Way Driving System

1. Activation sensors
2. Warning alerts
3. LED Illuminators for night images
4. HD Cameras capture images
5. Confirmation Sensors
6. Passive Markings
7. Software sends real-time verification of system activation
8. Future connected vehicle interface

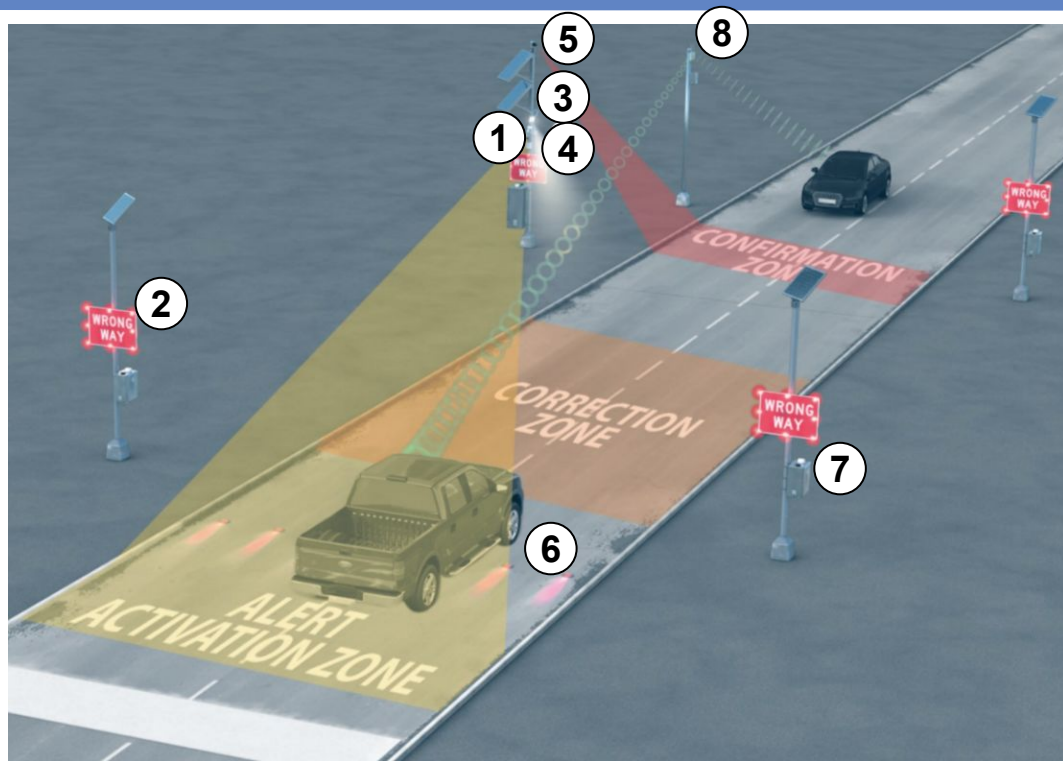


Image sourced from TAPCO

Wrong Way Driving

Other States' Efforts

- **Arizona, California, Ohio, Texas & Florida**
 - Installing new, oversized wrong-way signage (AZ,CA)
 - Lowering the wrong-way signage height from 7 feet to 3 feet (AZ,CA)
 - Installing red retro-reflective striping on signposts (AZ,FL)
 - Adding white pavement arrows pointing in the correct direction of travel (AZ,FL)
 - Adding LED illuminated WRONG WAY signs (FL, TX)
 - Adding in-pavement LED systems (CA)
 - Installing wrong way driving alert systems to detect, trigger lights, notify officials, and alert other drivers (AZ,FL,OH,TX)

Wrong Way Driving

UDOT/DPS Wrong Way Driving Working Group

- Coordination and review of crash records and data definitions
- Field off ramp review
- Review of design standards
- Exploration of enforcement practices

UDOT Technical Assessment Team

- Quick response team focused on identifying best available wrong way driving detection system

